

IS THE ECOSYSTEM BASED FISHERIES MANAGEMENT A REALITY IN THE BAY OF BISCAY? ANALYZING THE EFFECTS OF THE IMPLEMENTATION OF THE LANDING OBLIGATION AT AN ECOSYSTEM LEVEL

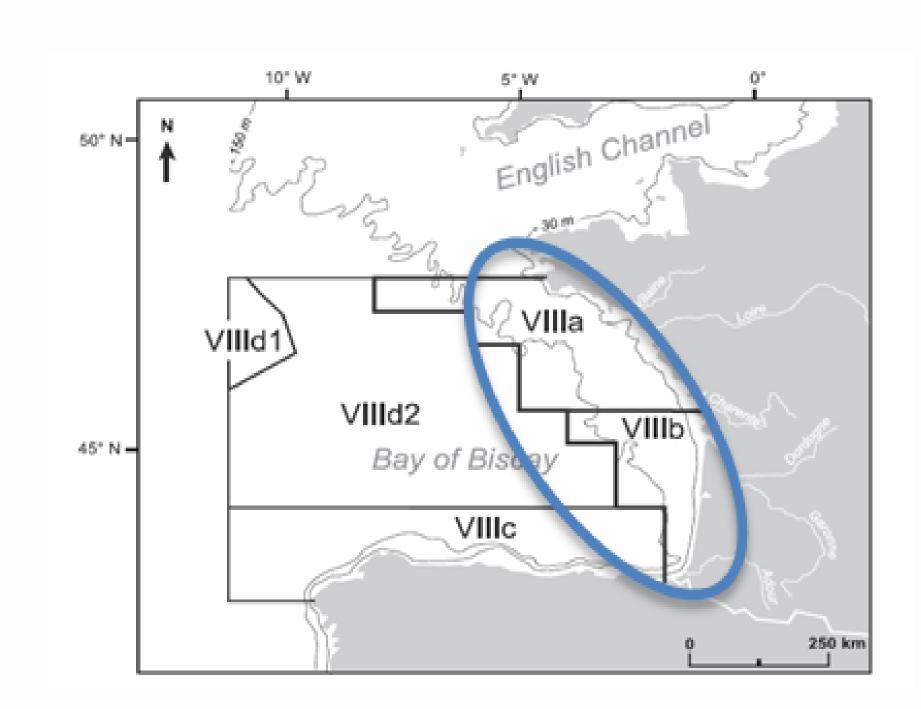
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THE CASE STUDY:

In this study we aim at assessing the potential impacts that the implementation of the Landing Obligation (LO-EU, 2013) might have on the Bay of Biscay ecosystem.

Target fishery: Mixed fishery (bottom otter and pair trawlers)

	Landings	Discards
РТВ	Hake	Hake (<mls) horse="" mackerel="" mackerel<="" th=""></mls)>
OTD	Hake, Megrim and Monkfish	
ОТМ	Cephalopods and Red mullet	

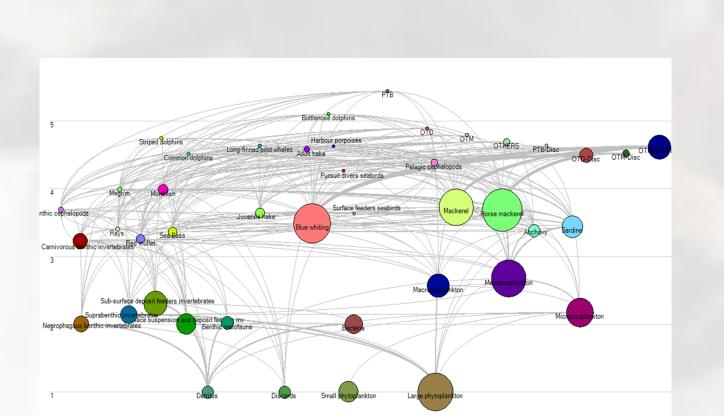


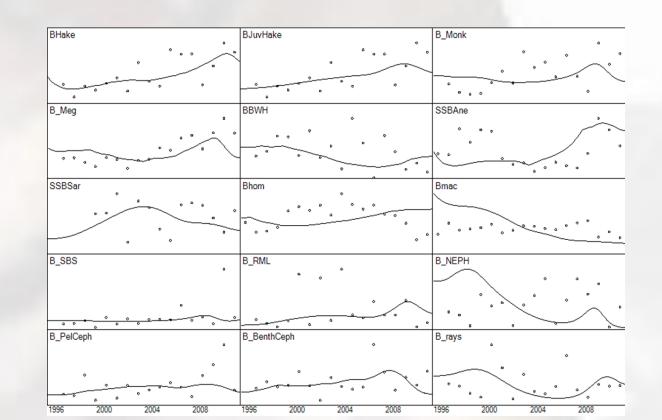
OUR TOOLS:

1. The Ecosystem model



A) Static picture of the ecosystem in 1996 B) Temporal dynamics (1996-2013)





DATA-SOURCES:

1.ICES

2.DCF3.DSP4.Literature

2. The Bio-economic model

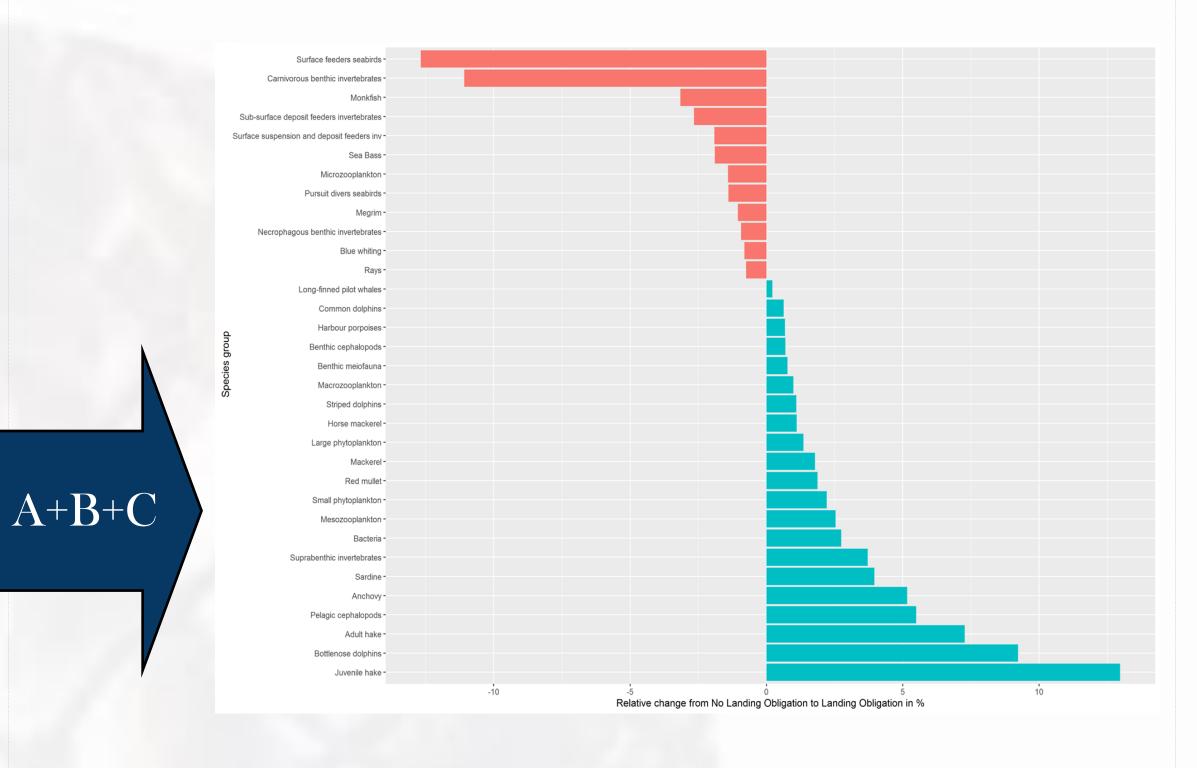


C) F values for hake and megrim for a full implementation of the LO.

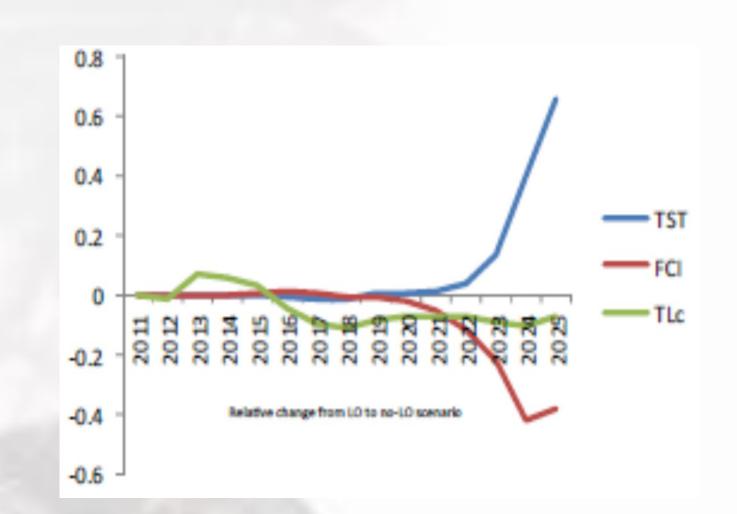


SOME RESULTS: Moving from NoLO to LO scenario:

A) Winners and Loosers—changes in total B



B) Changes in ecosystem properties



TST: Total System Throughput; FCI:Finn's Cycling Index; TLc:Trophic Level of the Cathc

MAIN CONCLUSIONS:

- There will be direct (seabirds and benthic invertebrates) and indirect (MON, MEG, WHB, BSS, HKE, Small pelagics) effects of the implementation of the LO in the short term, both negative and positive.
- Ecosystem properties change, when moving from a No LO to a LO scenario: thought the amount of matter produced by the system might increase, the reciclying index shows that less energy will be retained in the system, making the ecosystem more vulnerable to external pressures.
- Proposed management measures on human activities that take place in the marine environment should be evaluated using an EBFM framework aiming at avoiding effects that are a priori non expected but that could happen due to the complexity of these systems.

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EU, 2013. REGULATION (EU) No 1380/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC. Official Journal of the European Union, L 354/22.

[⇒] Prellezo, R., Carmona, I., García, D., 2016. The bad, the good and the very good of the landing obligation implementation in the Bay of Biscay: A case study of Basque trawlers. Fisheries Research, 181: 172-185.